

291300-19-H

COMPUTER SOFTWARE END PRODUCT DOCUMENTATION

December, 1998

R. Majewski

Prepared For:
NCCOSC RDTE Division
Building A33, Room L602W
53560 Hull Street
San Diego, CA 92152-5000

19990331 064

Contract Number N66001-97-C-6000



P.O. Box 134008 Ann Arbor, MI 48113-4008 734-994-1200

<http://www.erim-int.com>

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE December 1998	3. REPORT TYPE AND DATES COVERED SOFTWARE END PRODUCT DOC.; Dec. 1998	
4. TITLE AND SUBTITLE Computer Software End Product Documentation		5. FUNDING NUMBERS N66001-97-C-6000	
6. AUTHOR(S) R. Majewski			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) ERIM International Inc. PO Box 134008 Ann Arbor, MI 48113-4008		8. PERFORMING ORGANIZATION REPORT NUMBER 291300-19-H	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) NCCOSC/RDTE Division Building A33, Room L602W 53560 Hull Street San Diego, CA 92152-5000		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for Public Release. Distribution is Unlimited.		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) The attached document provides the documentation for the CUP Source Code Delivery to NRAD.			
14. SUBJECT TERMS CUP, Source Code		15. NUMBER OF PAGES 3	16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT S.A.R.

Computer Software End Items

Date: 16 December 1998
Contract Number: N66001-97-C-6000
Report Number: 291300-19-H
Data Item Number: A003

1 Summary

This document describes the Common UNIX Processor (CUP) Software source code delivery. The CUP image formation processor and GUI (v5.0) were delivered to NRaD/SPAWAR in both sourcecode and executable forms. This software was transmitted to NRaD/SPAWAR via Email as a UNIX tar save set that was compressed and then uuencoded; the transfer was made in February 1997. No follow-up mailing of an 8mm tape will be made at this time, but is available from EI upon request. Today's delivery contains only this document.

2 Assumptions

This document assumes that the CUP software will be installed on a Sun UNIX workstation and that the host workstation is running the Solaris 2.5 or 2.6 operating system. The host workstation should also have the Sun Sparcworks compiler package. CUP Configuration control is maintained by the Revision Control System (RCS), distributed by the Free Software Foundation. All UNIX makefiles in the CUP hierarchy use RCS commands to manipulate source code during compiling and linking.

3 CUP Directory Structure

The CUP software is structured into the following tree:

/var/u/cwp/NRaD

```
-----3dsar
| '-----3dsar_ifp
| | '-----RCS
| | '-----solaris2.5
| '-----bin
| '-----cup_hgm
| | '-----RCS
| '-----cwp_analy
| | '-----ana_util
| | | '-----RCS
| | '-----RCS
| '-----data
| | '-----RCS
| '-----globals
| | '-----RCS
| '-----gui
| | '-----RCS
| | '-----solaris2.5
| '-----makefiles
| | '-----RCS
| '-----RCS
| '-----tools
| | '-----RCS
| '-----utils
| | '-----RCS
| '-----wfg
| | '-----RCS
| '-----cup
| '-----fast_fft
| | '-----RCS
| '-----ifp
| | '-----cup_compress
| | | '-----RCS
| | | '-----solaris2.5
| | '-----cup_dc
| | | '-----RCS
| | | '-----solaris2.5
| | '-----cup_fft
| | | '-----RCS
| | | '-----solaris2.5
| | '-----cup_iac
| | | '-----RCS
| | | '-----solaris2.5
| | '-----cup_polar_format
| | | '-----RCS
| | | '-----solaris2.5
| | '-----cup_util
| | | '-----RCS
| | | '-----solaris2.5
| | '-----RCS
| | '-----solaris2.5
| '-----io
| | '-----RCS
| '-----lib
| '-----makefiles
| | '-----RCS
| '-----parse
| | '-----RCS
| '-----shmem
| | '-----RCS
| '-----tools
| | '-----RCS
| '-----RCS
```

Only subdirectories below /var/u/cwp/NRaD/ will be visible on the tar save set.

The "cup" subdirectory contains all the sensor-independent software in the CUP image formation processor. Examples of sensor-independent routines are the polar-to-rectangular interpolator and the 2D FFT.

The "3dsar" subdirectory contains all the sensor-dependent routines as well as utility routines specific to the ERIM DCS radar sensor. Sensor-dependent routines read the signal history and auxiliary data and perform operations like real-to-complex conversion and motion compensation.

The executable for the CUP graphical user interface (GUI) is called "cup" and can be found in the subdirectory ./3dsar/gui/solaris2.5/

The executable for the CUP image formation processor (IFP) is called "3dsar_ifp" and can be found in the subdirectory ./3dsar/3dsar_ifp/solaris2.5/

The real-to-complex filter (qdfilter.con) and the polar-to-rectangular interpolation filter (j0304512.con) are located in ./3dsar/data. One can also find the GUI configuration file (CupConfig.txt) and the CUP batch numbers files (cupBatchNums) in this directory.

It is a near certainty that you will be unable to rebuild the executables from the delivery tape. This situation can easily be remedied if desired by NRaD.

4 Open Issues

None.